AQUARION Water Company

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Quality Water for Life®

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Water Conservation Plan PWSID 1051010

The following information is provided to comply with Water Conservation Rule requirements.

Env-Wq 2101.05 Requirements for Existing Large Community Water Systems.

(a) An existing large community water system shall implement the measures described in this section.

(b) Each large community water system shall install water meters within 3 years of obtaining approval for a new source of water that is subject to RSA 485:3 for all of the following:

(1) Public sector water users except firefighting;

(2) Private water users; and

(3) All sources of water.

All production sources and services are metered.

(c) The water system shall size the water meters required by (b), above, in accordance with the specifications of the manufacturer.

Production meters are appropriately sized to match pump rates at each location. Customer service meters are matched with manufacturer specifications by performing fixture counts.

(d) In selecting, installing, and maintaining water meters, the water system shall comply with procedures and protocols described in "Manual of Water Supply Practices, Water Meters-Selection, Installation, Testing, and Maintenance," document identification number AWWA M6, American Water Works Association, 1999.

M6 practices are incorporated into Aquarion's corporate metering practices.

Source (production) meters

Annual calibrations are performed by an outside contractor

Interim calibrations are performed by staff as needed.

Service meters

The goal is to comply with the PUC's meter testing requirement

5/8-inch and 3/4-inch meters are tested every ten years

1-inch, 1.5-inch and 2-inch meters are tested every 4 years

(e) The water system shall read the water meters required by (b)(1) and (2), above, at least once every 90 days.

Residential service meters are read quarterly. Commercial service meters are read monthly.

(f) The water system shall read the water meters required by (b)(3), above, at least once every 30 days.

Production meters are linked to a SCADA system, which continuously records flow rates. Meter readings are also manually recorded daily.

(g) The water system shall implement a water audit and leak detection program in accordance with "Manual of Water Supply Practices, Water Audits and Leak Detection" document identification number AWWA M36, American Water Works Association, 1999, within one year of obtaining approval for a new source of water.

AWWA M36 guidelines are used to address lost water in the distribution system. Major activities involved hiring leak detection contractor every year to survey the entire distribution system for leaks. Utility staff also perform leak detection activities in the course of other routine system work, particularly when performing hydrant and valve maintenance. We also follow M36 recommendations for determining volumes of leaks and other non-revenue water uses.

(h) The water system shall repair all leaks identified by the activities required by (g) within 60 days of discovery unless a waiver is obtained in accordance with Env-Wq 2101.09.

Most leaks are repaired within a matter of days after their discovery, and all others are repaired within the 60-day requirement.

(i) The water system shall estimate the volume and percentage of unaccounted-for water in the water system once every year using protocols and procedures described in "Manual of Water Supply Practices, Water Audits and Leak Detection" document identification number AWWA M36, American Water Works Association, 1999.

Unaccounted-for water is calculated monthly, as a 12-month rolling figure, based on production volume, metered consumption, and non-revenue water, using guidelines published in AWWA M36.

(j) The water system shall prepare and submit a response plan to the department within 60 days if the percentage of unaccounted-for water in the water system calculated pursuant to (i), above, exceeds 15% of the total volume of water introduced to the water system.

Unaccounted-for water has not exceeded 15% in recent years, but a response plan would be implemented following any calendar year where unaccounted-for water exceeded the 15% target.

(k) The response plan prepared in accordance with (j), above, shall identify how the water system intends to reduce the percentage of unaccounted-for water to below 15% within 2 years, except for leaks that have been identified which must be repaired in accordance with paragraph (h).

Unaccounted-for water has not exceeded 15% in recent years, but a response plan would be implemented following any calendar year where unaccounted-for water exceeded the 15% target.

(l) The department shall approve the response plan within 90 days if it contains recommended actions that comply with the requirements specified in (k), above.

Unaccounted-for water has not exceeded 15% in recent years, but a response plan would be implemented following any calendar year where unaccounted-for water exceeded the 15% target.

(m) The water system shall implement the response plan in accordance with the approved schedule upon receiving approval from the department.

Unaccounted-for water has not exceeded 15% in recent years, but a response plan would be implemented following any calendar year where unaccounted-for water exceeded the 15% target.

(n) The water system shall implement pressure reduction within one year of obtaining approval of a new source of water when:

(1) Technically feasible;

(2) Consistent with water system industry standards and regulations; and

(3) Consistent with other public health and safety considerations.

Water pressure in our distribution system is deemed optimal and not excessive, being dictated by storage tank levels. Reductions in pressure would involve reducing the level of water in the tanks would compromise fire protection needs (fire fighting volume), or installing pressure reducing valves in many more locations, thereby increasing capital, operating and maintenance costs. These actions could degrade service quality by not meeting customers expectations for flow and pressure, and to date have not been deemed to have the potential to produce enough value to warrant the cost.

(o) The water system shall adopt a rate structure that promotes water conservation within 5 years of obtaining approval for a new source of water, as described below:

(1) The rate structure shall be based on:

a. A unit price of water; and

b. The amount of water used by each connection to the water system; and

(2) The unit price of water for residential customers shall:

a. Remain the same; or

b. b. Increase with the volume of water consumed.

Water rates for seasonal and non-seasonal classes have flat unit prices, regardless of volume metered (see attached water rate tariff).

Aquarion proposed an inclining block rate as part of its most recent rate case to encourage conservation. However, the Public Utilities Commission and interveners felt that the current quarterly reading and billing schedule was too infrequent to effectively communicate the relationship between cost and use to most customers and it was not accepted into the new water rates.

Aquarion is phasing in radio-read meters that will allow for an accurate and cost-effective conversion to monthly billing. To date (early 2010), ~60% of meters have been

converted to radio-reads. We project (but do not guarantee) to be 100% radio-reads by mid-2013. Conversion to monthly billing could then be implemented as part of a subsequent rate case.

(p) The water system shall complete a water conservation educational outreach initiative using materials prepared by the department as follows:

(1) The water system shall implement the applicable public notification and outreach requirements to municipal governments within its service area in accordance with Env-Wq 2101.11; and

Not applicable

(2) The water system shall implement an educational outreach initiative for its customers to promote water conservation immediately upon obtaining approval for the new source.

Aquarion already conducts water conservation programs in its service area (Hampton, North Hampton and Rye). Some examples of past and current activities:

- **Our website (www.aqurionwater.com) provides information that customers may use to reduce their water use.**
- **We routinely incorporate conservation themes in our public relations activities, e.g., promotional activities for National Drinking Water Week.**
- **We promote the sale of rain barrels to encourage use of non-potable water for outdoor uses.**
- **We conducted water audits of municipal buildings in our service territory to identify water efficiencies.**
- **In cooperation with the North Hampton Water Commission, promote water efficient plumbing codes.**

(q) Activities completed in accordance with (b) through (p), above, shall be completed by water system personnel under the supervision of a certified operator pursuant to Env-Ws 367.

I am the primary water system operator (certificate number 2991).

If you need additional information, please contact me at 926-3319 ext 116.

Sincerely,
Aquarion WATER COMPANY OF NEW HAMPSHIRE

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